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		Metric: 3.3.1

Links to the papers published in journals listed in UGC CARE list



Criterion – III

3.3.1 Number of research papers published per teacher in the Journals notified on UGC CARE list during the last five years

2018-19 to 2022 -23

	Andhra Christian College, Guntur Affiliated to Acharya Nagarjuna University Sambasivapet main road, Guntur -522001, A. P. E mail: accollegeguntur@gmail.com website: www.accollegeguntur.com	Criterion: III Metric: 3.3.1
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3.3.1.1 Number of research papers published per teacher in the Journals notified on UGC CARE list during the last five years

S. No.	Year	No. of Research Papers in the Journals
1.	2022 - 2023	05
2.	2021 - 2022	04
3.	2020 - 2021	04
4.	2019 - 2020	05
5.	2018 - 2019	08




 PRINCIPAL
 ANDHRA CHRISTIAN COLLEGE
 (Day, Evening & P.G.)
 GUNTUR

PUBLICATIONS

విద్యా విలువలు - అవశ్యకత

డా॥ కనపాల జోసఫ్

తెలుగు శాఖ అధ్యక్షులు

ఆంధ్ర క్రైస్తవ కళాశాల

గుంటూరు

చరవాణి : 9849025505

కలానుగుణంగా విద్యా భోధనో ఉహకందని మార్పులు చోటు చేసుకుంటున్న సంగతినిచూస్తూనే ఉన్నాము. ఈ మార్పు విద్యార్థులకు ఎంత వరకు ఉపయోగ కరంగా ఉన్నాయో అన్న దానికి సరైన సమాధానం చెప్పడం కష్టమే దీనిని సింహా వలోకనం చేసుకోవాల్సిన అవశ్యకత ఎంతైనా ఉంది దీనిని పరిశీలించినప్పుడు సంప్రదాయ కాలపు విద్యకు ఆధునిక కాలపు విద్యకు మధ్య ఉండే ప్రధాన తేడ విలువలు కోరవడడమే. ఒకప్పుడు విద్యా భోదనలో ఉపమానాలను, కథలను జోడించి భోదన జరిగేది. అందువల్ల ఏక కాలంలో పాఠ్యాంశల మార్పులతో పాటు ఆ కథల్లోనూ, ఉపమానల్లోనూ బోలెడంత విలువలు ఉండేవి. అలాగే భోదనలో అప్పనిసరిగా సాహితీ, సాంస్కృతిక అంశాలను జోడిస్తూ భోదన ఉండేది. తద్వారా విద్యానంతరం విద్యార్థులు నైతిక విలువలను అభరణంగా కలిగి సాంఘిక, సాంస్కృతిక అంశాలను జోడిస్తూ భోదన ఉండేది. తద్వారా విద్యానంతరం విద్యార్థులు నైతిక విలువలను అభరణంగా కలిగి సాంఘికసాంస్కృతిక సంబంధాలను కలిగి తమకంటూ ఒక ప్రత్యేకమైనా వ్యక్తిత్వాన్ని కలిగి ఉండేవారు. దీనికి తోడు జీవిత చరిత్రలు, సజ్జనుల సాంగత్యం సంపూర్ణవిలువలతో కూడి సంపూర్ణ వ్యక్తిత్వానికి, దీర్ఘకాలిక శ్రేయస్సుకు గొడుగులాగా ఉండేవి.

విలువల విద్య నిర్వచనం. విద్యార్థుల్లో అభ్యాసనా అనుభాలను కలిగించడానికి ఉపాధ్యాలు అధ్యాపకులు విభిన్న భోదనా పద్ధతులను పాటిస్తూ ఉంటారు. వారి వారి మానసిక స్థితులను బట్టి రక రకాల ఉపమానాల ద్వారా జీవితపు విలువలను జతచేస్తూ భోదన జరిగేది. దీనివల్ల వారిలో సానుకూల దృక్పథం, సామర్థ్యం కలగడాన్నే విలువలతో కూడిన విద్యగా చెప్పుకోవచ్చు. నిజానికి విలువతో కూడిన విద్య అంటే ఒకరికొకరు విలువలను వినిమయం చేసుకొనే ప్రక్రియ. ఈ ప్రక్రియ మానవ సమాజంలో కాపుచ్చు తమ సొంత శ్రేయస్సు కోసం కావచ్చు. వీటిని కాపాడుకోవాలంటే విలువలను లక్ష్యం కలిగిన వారికే మాత్రమే సాధ్యం అవుతుంది.

ON FNS - COMPACTNESS IN FUZZY NEUTROSOPHIC SUPRA TOPOLOGICAL SPACES

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Abstract: In this paper, we introducing fuzzy neutrosophic supra first countable (FNS - FCS), fuzzy neutrosophic supra second countable (FNS- SCS) and fuzzy neutrosophic supra compactness (FNS- compactness), fuzzy neutrosophic supra Q^μ - compactness (FNS - Q^μ - compactness) in fuzzy neutrosophic supra topological space (FNSTS). we derive the union of two FNS – compact spaces is also FNS – compact space and similarly the union of two FNS - Q^μ - compact spaces is also FNS - Q^μ - compact space. Also we define some theorems using finite intersection property and productive property. Finally we observe that our notions preserve under one – one, onto and continuous mapping.

1. Introduction: In 1965, Zadeh [9] introduced the notion of fuzzy sets. The study of fuzzy topological spaces was first initiated by Chang [4] in 1968. K. Atanassov [8] introduced the notion of intuitionistic fuzzy sets (IFS) in 1986. Later Coker [5,6] introduced intuitionistic fuzzy topological space. In 1983[2], Mashhour et al. introduced the concepts of supra topological spaces, supra open sets & supra closed sets. Later on 1987, ME Abd El-Monsef et al [10] introduced the concept of fuzzy supra topological as a natural generalization of the notion of supra topological spaces.

In 2002, Florentin Smarandache [15] introduced the extend the IFsets into Nsets. Nset is classified into 3 independent functions. In 2012, Salama, Alblawi [1,13,14] introduced the NTY. NTSs are very natural generalizations of FTSs. In 2014, Salama, Smarandache and Valeri [14] introduced the concept of neutrosophic closed sets and continuous functions. Dogen Coker [3,7] & Bayhan introduced Fuzzy-compactness in IFTSs. In 2018,2019,[11,12] Md.Aman Mahbub introduced some properties of compactness in IFTSs and On Q-Compactness in IFTSs.

In this paper two definitions of FNS - compactness in ‘fuzzy ‘neutrosophic supra ‘topological ‘space and some of their features are defined.



HEAT TRANSFER IMPACTS ON CASSON FLUID FLOW

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Introduction

Ahmadi and Gerold[1] studied on the influence of flow rate, flow behaviour, and particle attention on the heat transfer coefficient of a CuO/water nanofluid each experimentally and theoretically and proved enormous enhancement in the heat transfer coefficient relative to the low concentrations. Buongiorno [2] proposed an alternative rationalization for the extraordinary heat transfer coefficient increases. Hady et al.[3] explored with the flow and heat transfer characteristics of a viscous nanofluid over a nonlinearly stretching sheet in the presence of thermal radiation, covered in the energy equation, and variable wall temperature. Nadeem et al. [4] introduced the modelling of a two-dimensional Williamson fluid for a stretching sheet. Hayat et al. [5] modelled and analyzed by the usage of Rheological expressions of Williamson fluid, the consequence of chemically reactive flow of nanomaterial, involves thermophoresis and Brownian motion.

The intention of the present work is to attain a numerical solution to the boundary layer flow, heat and mass transfer of nanofluid over a cylinder with first order velocity and convective conditions by means of the use of the fourth-order Runge Kutta integration scheme along with shooting process.

Mathematical Formulation

A regular two-dimensional laminar incompressible boundary layer flow of a Casson Williamson fluid flowing upon a stretching cylinder with thermal radiation is regarded in this



The influence of Cu^{2+} ions on the ionic, electronic conductivity and optical characteristics of $\text{Li}_2\text{O-SrO-B}_2\text{O}_3$ system

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ABSTRACT

Melt quenching technique was used for preparing the glass network $10\text{Li}_2\text{O}-30\text{SrO}-(60-x)\text{B}_2\text{O}_3 \cdot x\text{CuO}$ ($0 < x < 1$, where $x = 0, 0.2, 0.4, 0.6, 0.8$, and 1 mol%). The samples were investigated by analysing spectroscopic and dielectric properties. X-ray diffraction (XRD) asserted the glassy nature of the samples. Optical absorption spectra of the specimens displayed a prime band centred nearly at 750 nm due to Cu^{2+} ions. A continuous increase in the intensity of this band is noticed with a rise in the concentration of CuO . Electron spin resonance (ESR) spectra of the glasses confirmed the existence of Cu^{2+} ions. Spin-Hamiltonian parameters of the specimens were estimated. An analysis on the Fourier transform infrared (FTIR) curves confirmed the bands due to conventional borate units. The dielectric investigations supported the depolymerization of the specimens with an increase in the content of CuO .

1. Introduction

Among the different types of glass formers, B_2O_3 is identified as the best glass former. Borate glasses possess high thermal stability and teeny melting point. These glasses are used as the basic host materials in preparing solid state lasers, electro-optic switches, optical converters, electro-optic modulators, and luminescent materials [1–7]. Li_2O is one of the notable glass modifiers. It infiltrates the specimen by bursting B–O–B links and establishes bonding defects. Lithium ions generate non-bridging oxygen's (NBOs) in the system. Optical characteristics of the samples are modified by NBOs [1–5]. Borate glasses combined with alkaline earth oxides find technical applications in solar energy converters, phosphors, radiation dosimetry, vacuum ultraviolet optics, semiconductor lithography, and numerous electronic equipments [3,5]. The quality of borate glasses can be upgraded by adding SrO in a suitable proportion. The Sr^{2+} ions create hollow spaces and trouble-free paths to facilitate the motion of ions by breaking the B–O–B bonds [3,5].

The ionic and electronic conductivities of lithium borate glasses are very much improved when they are amalgamated with multivalent transition metal ions [1–5]. The ionic conductivity is expected owing to the migration of lithium ions. Electronic conductivity is predicted because of the electron hopping among polyvalent transition metal ions

[1–5]. Borate glasses alloyed with CuO are used as memory elements [1, 6,7]. Cu^0 , Cu^+ , Cu^{2+} , and Cu^{3+} are the specific valance states of copper in borate glasses [1,8,9]. As the glass formers, Cu^+ ions strengthen the glass network. Cu^{2+} ions perform in the same way as those of glass modifiers. These ions engage octahedral positions and modify the network [10–12]. Cu^{2+} ions generate Li–O–Cu layers in the glass. Such glass can be used as the cathode material in new generation's lithium ion batteries [6–11]. The collection of Cu^0 particles augments the mechanical stability of the glasses. This phenomenon is used in designing optical memory and optoelectronic devices [6–11]. There is a chance for Cu^+ ions to transform into Cu^0 and Cu^{2+} ions by electrochemical reduction and oxidation methods continuously. The existence of such copper particles and ions simultaneously enhances the electrical characteristics (both polaronic and ionic conductivities) of the glasses [1,10].

Literature survey reveals that B. Ashok et al. prepared the $\text{Na}_2\text{O}-\text{Al}_2\text{O}_3-\text{B}_2\text{O}_3-\text{CuO}$ glasses. They carried out electron paramagnetic resonance (EPR) and Optical absorption studies on the $\text{Na}_2\text{O}-\text{Al}_2\text{O}_3-\text{B}_2\text{O}_3$ glasses using Cu^{2+} as a spin probe [6]. B. Sumalatha et al. investigated the spectroscopic properties of $10\text{RO} + 30\text{ZnO} + 60\text{B}_2\text{O}_3$ ($\text{R} = \text{Mg, Ca and Sr}$) and $10\text{SrO} + (30-x)\text{ZnO} + 60\text{B}_2\text{O}_3 + x\text{CuO}$ ($x = 0, 0.1, 0.3, 0.5$, and 0.7 wt.%) glasses [7]. B.J.R.S. Swamy et al. studied the thermoluminescence (TL) characteristics of γ -ray irradiated calcium fluoro

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వీరుడు - మహావీరుడు - కారా

డా॥ కనపాల శ్రీనివాస్

తెలుగుశాఖ అధ్యక్షులు,

ఆంధ్రక్రైస్తవ కళాశాల,

గుంటూరు, ఆంధ్రప్రదేశ్.

చరవాణి : 9849025505

అగ్రశ్రేణి కథారచయితలు కథలు రాస్తున్న కాలంలో కాశీపట్నం రామారావు కథకుడిగా తనదైన కథా లోకాన్ని సృష్టించుకున్నాడు. గణితశాస్త్ర ఉపాధ్యాయుడిగా కొనసాగుతూనే కథానికా ప్రపంచంలో తనదైన వరసడితో కథలు రాసేవారు. 1943లో 'ప్లాటుపారమో' అనే రచనతో వీరి రచనా ప్రస్థానం ఆరంభమైంది. ఆరంభంలో దాదాపు 1964 కి ముందు మధ్యతరగతి జీవితాలను ఇతివృత్తంగా కథలు రాస్తుండేవారు. అనంతరం రావిశాస్త్రిగారి సాన్నిహిత్యం, మార్క్సిస్ట్ తాత్త్వక దృక్పథంతో తన ఆలోచనా పరిధిలో మార్పు చోటు చేసుకుంది. అప్పటి నుండి నిజజీవితంలో అనుభవించిన, పరిశీలించిన కష్టాలను, సంఘర్షణలను, తన కథల్లో చోటు చేసుకున్నాయి. అలాగే సమాజంలో అట్టడగు వర్గాల జీవన సమరాన్ని సునిశితంగా పరిశీలించి తన పాత్రలలో చూపారు. ఆవిధంగా తొలుత 18 గొప్ప కథలు రాశారు.

ఈకథలు వస్తు పరంగా, శైలిపరంగా అంతకు ముందు రాసిన కథలకు భిన్నంగా, సామాజిక స్పృహతో కూడుకుని ఉండేవి. కథల్లో కనిపించే ప్రాంతాలు, అందులోని పాత్రలు, వారి మాట తీరు, చేతల తీరు బాగా పరిచయం. అందువల్ల కథల్లో ఎంతటి నాటకీయమైన సంఘటన ఉన్న వాటిని చాలా సహజంగా ఆవిష్కరిస్తాడు. అది 'కారా' కు మాత్రమే తెలిసిన కిటుకు. అందువల్ల నేమో ఇన్ని సంవత్సరాలుగడుస్తున్నా ఇప్పటికీ వీరి కథలపై జాతీయ సదస్సులు, పరిశోధనలు, చర్చలు జరుగుతున్నాయంటే ప్రముఖ రచయిత, పరిశోధకులు వేల్చేరు నారాయణరావు అన్నట్లు "ఈ కథలు ఒక్కసారి చదవగానే అర్థమైపోవు ఒక్కోసారిని లొతిచిన కొద్ది కొత్త విషయాలు బయట పడుతూనే ఉంటాయి అంటారు. అందుకు ఉదాహరణగా 'యజ్ఞం' కథను చేప్పుకోవచ్చు. కాశీపట్నం రామారావు రాసిన మొత్తం '54' కథలు ఇక్కడ ప్రస్తావించటం సాధ్యం కాని పని. కనుక నాకు సచ్చిన రెండు కథల్ని గురించి ఇక్కడ ప్రస్తావిస్తాను.

గ్రామాలు 'నాగరికత' కోటు తొడుక్కోని రోజుల్లో మల్లెపూలంత తెల్లంగా ఉండేవి. అనాదిగా, వారసత్వంగా వస్తున్న సంస్కృతీ సంప్రదాయాలకు ఆచరిస్తూ ఒడుదుడుకులు లేకుండా జీవించేవారు.

Indole 3-Acetic Acid Production by *Aspergillus* Species Isolated From Chilli Rhizospheres

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ABSTRACT

In the present study soil samples were collected from different chilli rhizospheres in the vicinity of Guntur, Andhra Pradesh, India and the field trials were conducted in the year of 2018-2019. A total of 57 microbial strains were isolated from chilli rhizosphere. All the strains were isolated from potato dextrose agar media by using 10-4 serial dilutions. Fine and clear colonies were picked and transformed into a culture tubes for further studies. For the preliminary screening there are 10 isolates were considered as fungal strains based on spore morphology. The spores are round and irregular in shape with green to light brown in colour. Preliminary identification of these fungal isolates was based on morphological and cultural characters on potato dextrose agar medium. All ten strains showed the maximum indole acetic acid production on Czapekdox agar medium. Various optimization studies like incubation period, pH, temperature and carbon and nitrogen sources were studied by affecting the indole acetic acid productions i.e., 10 days incubation period, pH 7.0 and 30°C. Carbon and nitrogen sources are also affected the indole acetic acid production in this optimization. A carbon and nitrogen source in the optimal medium plays a major role for the production indole acetic acid. Among them, the strain *Aspergillus* PB-7 in presence of Glucose and peptone showed the maximum IAA production of 110µg/ml and 75µg/ml. Successful inoculation of agricultural crops with biocontrol plant growth promoters includes the delivery of sufficient inoculum to the target, economical production of large quantities of microorganisms. Rhizospheric microbes especially plant growth promoting microorganism were promising to be developed as multifunctional biofertilizer.

KEY WORDS: PLANT GROWTH PROMOTERS (PGP), INDOLE ACETIC ACID (IAA), POTATO DEXTROSE AGAR (PDA)..

INTRODUCTION

Chilli can be grown in a wide range of Black, Brown, Red and Clay soils, but black soils which retain moisture for long periods are suitable for rain fed crop whereas well drained soils, deltaic soils and sandy loams are good under irrigated condition. Whereas Sandy and

loamy soils poorly supported to chilli production when compare to black soils. Various climatic conditions like humid and hot weather supports to the chilli plants. Sometimes environmental conditions are also adversely affected the chilli growth and fruit production. India is the largest producer and consumer of chilli among other major producers in the world. India contributes about 47 per cent to the total world production, and assumes first position in terms of international trade, exporting 38 per cent of its total production.

Chilli production in India is moving northwards on increasing demand from diversified sectors and changing consumption patterns. Dry chilli production rose by nearly 52 per by nearly 52 per cent from 9.7 lakh tones in 1997-98 to about 18 lakh tonnes. More than 80% of the

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**CHARACTERIZATION OF CHITINASE PRODUCING BACILLUS
SPECIES ISOLATED FROM CHILLI RHIZOSPHERES OF GUNTUR
DISTRICT ANDHRA PRADESH**

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ABSTRACT

Chitin is the second most abundant organic and renewable source in nature, after cellulose. Chitinases are chitin-degrading enzymes have great importance in enzyme market. A total of 10 bacterial isolates belonging to *Bacillus* species isolated from chilli rhizosphere, Guntur district of Andhra Pradesh, India. All the isolates were tested for chitinase production on colloidal chitin medium. Among them four isolates i.e. *Bacillus* sp. PB-3(2.22 IU/ mg), *Bacillus* sp. PB-5(2.75 IU/ mg), *Bacillus* sp. PB-6(2.22 IU/ mg), and *Bacillus* sp. PB-8(3.46 IU/ mg) showed chitinase production. Optimization studies like incubation period, pH, carbon and nitrogen sources were determined by these four isolates. Chitinase production was maximum on 6 days of incubation (3.46 IU/ mg) period and the optimum pH was found to be 7.0. Carbon and nitrogen sources greatly influenced the chitinase production. Among them 1% glucose and 0.5% glycine was the best for chitinase activity.

KEYWORDS: *Bacillus*, Chitinase, Carbon and nitrogen sources

1. INTRODUCTION

Screening of diversified microorganisms from different habitats and their optimum utilization in industrial sector is the need of the hour. The increasing energy demands has drawn worldwide attention on the utilization of renewable resources particularly agricultural and forest residues, the major components of which are cellulose, starch, lignin, xylan and pectin. These materials have attracted considerable attention as alternative feed stock and energy source. Since they are available abundantly several microbes are capable of using these



OPTIMIZATION STUDIES ON PLANT GROWTH PROMOTING BACTERIAL ISOLATES FROM CHILLI RHIZOSPHERE

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Abstract:

Plant growth promoting bacteria are known to influence the plant growth by various direct or indirect mechanisms. In search of efficient PGPR strains with multiple activities, a total of 10 bacterial isolates belonging to *Bacillus* species isolated from chilli rhizosphere, Guntur district of Andhra Pradesh, India. Out of ten only one isolate *Bacillus* sp. PB-3 showed potential activity of producing IAA, Gibberellic acid production, Siderophore production. *Bacillus* sp. PB-3 showed the maximum IAA (85 µg/ml) and Gibberellic acid productions 52 µg/ml were observed. An orange halo appears around the *Bacillus* species on CAS agar media indicates the siderophore production. The optimum conditions for siderophore production in *Bacillus* sp. PB-3 was selected for this study. CAS medium was supplemented with mannitol (18.6 µg/ml) and Urea (18.4 µg/ml) was used as carbon and nitrogen sources showed maximum amount of siderophores. These plant growth promoting abilities can make this isolate a potential PGPR candidate for its application in sustainable agriculture.

Keywords: Gibberellic acid, Indole Acetic Acid, Siderophore

Introduction:

In agriculture plant growth promoters play a major role for sustainable production. Bacteria and fungi also play a key role in agriculture. The genus *Bacillus* sp. stand out as one of the main genus of PGP used to promote of plant growth. Rhizospheric microorganisms produce vitamins, antibiotics, plant hormones, synthesis of vitamins, amino acids, auxins, cytokinins and gibberellins which stimulate plant growth and antagonism with potential plant pathogens and communication molecules that all encourage plant growth. Plant growth hormones (IAA and

AUSTRALIAN ABORIGINE'S CRAVING FOR LIBERATION FROM THE WHITES' SO CALLED LEGITIMATE PROTECTION BOARD: AN ANALYTICA STUDY

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Abstract:

From the very beginning, far-reaching incompatibilities were the main factors which led the Europeans and Aborigines being unable to come to terms with each other. The contrast was enormous in that one was 'civilised' and 'sophisticated' and the other considered 'uncivilised' and 'primitive'. Therefore, it was difficult for Europeans and the Aborigines to understand each other's complex societies, habits, intelligence and social values. To the Aborigines, an intrinsic part of their life was deep emotional attachment to the land, which had mythical and social values of considerable significance. The entire continent had mythical signs and values related to their tribal system and status. They were completely dependent on land for their dreams and aspirations. Through it, they had acquired their inspirations for art, music, dancing, and other forms of cultural standing and lived in comparative harmony with their environment. Their lives were not at all simple. They were with harsh climate, inhospitable land, droughts, and fires; they had a lot to contend with. Despite all the adversities, they lived in relative peace and harmony until the arrival of the Europeans.

Key words: *Assimilation policies, genocide, protection boards, terra-nullies etc.*

Ever since their introduction, Europeans failed to understand the Aboriginal values of environment appreciation, respect for the past, and privileges affecting them. These attributes had assured their future and their survival for over 60,000 years. From the moment Aborigines realised that Europeans had come not just to visit them but to settle permanently, the Aborigines regarded the intrusion into their lives with disdain. Many took up their primeval armaments and struggled for their survival. Due to the fact that they were unable to organise themselves into a fighting force and were against sophisticated British firing power, they were crushed. Later, most Aboriginal attacks became mere skirmishes on guerrilla basis; they seldom succeeded in pinning the enemy.

For ages land was the utmost component in the lives of Aboriginal Australians. They were intimately familiar with all aspects of it, as their dependence was directly related to it. Their everyday living demanded that they should have adequate knowledge of land. They were in harmony with all living creatures around them. Through mythical beliefs and dreaming their natural world was included in their social world. Ceremonial sites were of particular significance, unlike other areas for hunting and gathering. Not only the ceremonial sites but also the whole concept of land was sacred to them. Their mythical beliefs came very close to creation of land, and since myth was closely related to their socio-religious terms, land became the sacred issue in an Aboriginal culture. In British terms, land was a God-given gift to them. It was highlighted by special significance and related to their sacred beliefs with spiritual importance. Land was an inalienable and incontrovertible right of possession. Spiritual linkage to



Research Article

CHARACTERIZATION OF L- ASPARGINASE AND LIPASE PRODUCING ASPERGILLUS SP. DPB-365 ISOLATED FROM CHILLI RHIZOSPHERES

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Abstract

This paper describes production and characterization of L-Asparaginase and Lipases from *Aspergillus* species isolated from chilli rhizosphere in the vicinity of Guntur, Andhra Pradesh. The isolated fungi were screened for L-asparaginase production using Czapek's agar media. On the basis of pink colour zone formed, ten fungal strains were selected and identified as *Aspergillus* species and names as *Aspergillus* sp. DPB-365. This study investigates the optimization and production of L- Asparagine and Lipase. Days of incubation, temperature, pH, supplementary carbon and nitrogen sources on the production of L- Asparagine and Lipase was studied and accordingly optimum conditions were determined. The isolated soil fungi *Aspergillus* species is a strain that produces high levels of L- Asparagine, under optimized culture conditions, viz., on the third day of incubation at an optimum pH of 7.5 and temperature of 37°C. The isolate *Aspergillus* sp. DPB-365 showed highest enzyme L- Asparaginase production 71.2 IU/mg and Lipase production 65.5 IU/mg respectively. L-asparaginase has been used as anti-tumor agent for the effective treatment of acute lymphoblastic leukemia and as food processing aid to reduce the acrylamide formation during frying of starchy foods at high temperature.

Keywords: L- Asparaginase, Lipase, *Aspergillus*.

INTRODUCTION

Enzymes are one of the essential products acquired for the needs of human through microorganisms. Enzymes like Amylases, Lipases, L- Asparaginase, Glutaminase, Proteases and Cellulases has great industrial value in the present-day market. Among these Amylases plays a crucial role in enzyme market. Most of the prominent enzymes like protease, cellulases and amylase were used in many industries. L-asparaginase belongs to an amidase group that produces aspartic acid and ammonia by asparagine hydrolysis (Wriston and Yellin, 1973, Capizzi *et al.*, 1984). The search for other asparaginase sources, like eucaryotic microorganisms, can lead to an enzyme with less adverse effects. The importance of microorganisms as L-asparaginase sources has been focused since the time it was obtained from *Escherichiacoli* and its antineoplastic activity demonstrated in guinea pig serum (Broome, 1961; Mashburn and Wriston 1964; Roberts *et al.*, 1966; Schawartz *et al.*, 1966, Boyse *et al.*, 1967). This enzyme is widely distributed, being found in L-asparaginase is widely distributed, being found in animal, microbial and plant sources. Large number of microorganisms that include *Erwinia carotovora*, *Pseudomonas stutzeri*, *Pseudomonas aeruginosa* and *E. coli*. It has been observed that eukaryotic microorganisms like yeast and fungi have a potential for asparaginase production. For example, the mitosporic fungi genera such as *Aspergillus*, *Penicillium*, and *Fusarium*, are commonly reported in scientific literature to produce asparaginase (Abdel Fatteh *et al.*, 2002; Qin and Zhao, 2003; Wade *et al.*, 1971). The literature reports suggested that the enzyme produced by different microbial strains differed in some physiological, biochemical, catalytic and immunological properties. So the continuous screening program is necessary for the isolation of novel microbial strains that could produce an effective enzyme.

To our knowledge, reports on the production of L-Asparaginase from *Bacillus* and *Aspergillus* species is very limited. In the present investigation, the one-factor-at-a-time approach was used to select the best combination of incubation period, pH, temperature, carbon, nitrogen sources studied.

MATERIALS AND METHODS

Isolation of fungi: The rhizosphere soil samples from the chilli fields of 10 different areas of Guntur, district of Andhra Pradesh, India were collected for the study. Fungal strains were isolated on Potato Dextrose Agar (PDA) medium by soil dilution plate technique (Rappilly, 1968) using 10^{-3} to 10^{-5} dilutions. The plates were incubated at $28 \pm 2^\circ\text{C}$ for 5 days. Fungal colonies appeared in the plates were noted and sub cultured. After purified by single spore isolation method and they were maintained on potato dextrose agar (PDA) slants. Identification of Fungal isolates was based on culture characters as well as microscopic parameters (conidiophores branching, phialides shape and position, spore size and shape) (Nagamani *et al.*, 2006). The pure cultures were stored in the refrigerator at 4°C for further studies.

L- Asparaginase production: The production of L-asparaginase was carried out by using 20 g of carob pod as a substrate under solid state fermentation. The moisture content of the flask is 65% were maintained and inoculated 1 ml of inoculum (1×10^7 spores/ml). The content of the flask were mixed thoroughly gently beating the flasks on the palm of hand and incubated in slanting position at 35°C for 7 days. The pH 4.5 was maintained throughout the fermentation process.

Enzyme Assay: Assay of enzyme was carried out as per Imada *et al.* 0.5 ml of 0.04 M asparagine was taken in a test tube, to which 0.5 ml of 0.5 M buffer (acetate buffer pH 5.4), 0.5 ml of enzyme and 0.5 ml of distilled water was added to make up the volume up to 2.0 ml and incubate the reaction

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Indole 3-Acetic Acid Production by *Aspergillus* Species Isolated from Chilli Rhizospheres

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ABSTRACT:

Effect Of Loratadine Tablets on the Symptomatic Control Of Seasonal Allergic Rhinitis in Adults Challenged with Ragweed Pollen in the Environmental Exposure Unit in Compassion with Azelastine Nasal Spray with Loratadine Tablets, Cetirizine Tablets, and Placebo: A Post Hoc Analysis of Total Symptom Score

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Abstract

Loratadine is a second-generation, non-sedating antihistamine used for the relief of allergic rhinitis symptoms. Previous studies reported that when loratadine was encapsulated, the onset of action for symptom relief was 180 min. However, unmodified loratadine tablets were not evaluated at that time. Using data from a previously published Environmental Exposure Unit (EEU) study comparing azelastine nasal spray with loratadine tablets, cetirizine tablets, and placebo, this post hoc analysis determines the onset of action of loratadine tablets, by analyzing the total symptom score for the relief of nasal and ocular seasonal allergic rhinitis (SAR) symptoms.

Keywords: Allergic rhinitis, Environmental Exposure, Loratadine, Commencement of action,
Ragweed pollen, Seasonal allergies, Outdoor allergy.

Introduction

A Phase IV, randomized, single-center, double-blind, placebo-controlled, double-dummy, four-way crossover study was conducted in the EEU. Seventy participants were randomized sequentially into one of the four treatments during ragweed pollen exposure. Nasal and ocular symptom scores were self-reported by the participants and recorded. The original study analysis was carried out by evaluating the nasal symptom scores only. For this post hoc analysis, both nasal and ocular data from the loratadine and placebo treatment arms were analyzed. The primary endpoint for this analysis was the Commencement of action of loratadine as measured



Isolation and characterization of *Streptomyces* spp showing antagonistic activity against fungal pathogens effecting soybean crop

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Abstract

A total 93 cultures of *Actinomycetes* were screened for their antagonistic activity against major fungal pathogens of soybean crop. Viz., *Colletotrichum lindemuthianum*, *Fusarium oxysporum*, and *Rhizoctonia solani*. Dual culture assay was performed. Glucose Casaminoacid yeast extract agar (GCY) plates were prepared. A 5mm fungal discs were placed on the one edge (1cm from the corner) with *Actinomycetes* streaked on the other edge of the plate (1cm from the corner) followed by incubation at $28 \pm 2^\circ\text{C}$ for four days. Control plate growth has covered the whole plate. The inhibition of fungal mycelium was measured as the distance of inhibition in cm. All the plates were maintained in triplicates and mean values were taken. Three isolates namely NAVS13, KNSS3, CHSS3 inhibited *C. lindemuthianum*, *F. oxysporum*, and *R. solani*. The isolates were further evaluated for Cellulase, Lipase, Protease, HCN, phosphate solubilization, production of growth hormone IAA, production of Siderophore, Chitinase, β -1, 3-Glucanase, and physiological properties. The isolates were subjected to molecular characterization and identified as *Streptomyces rochei*, *Streptomyces cavourensis* and *Streptomyces alfaifa*.

Keywords: soybean, actinomycetes, fungal pathogens, PGP traits, antagonistic activity

Introduction

Soybean (*Glycine max* (L.) is originated from East Asia. It is cultivated as one of the important pulse crops in India with a production of 15.68Metric tons in an area of 3.89 lakh hectares. However, the production can be still enhanced by limiting the problems due to diseases caused to Soybean especially from *Colletotrichum lindemuthianum*, *Fusarium oxysporum*, and *Rhizoctonia solani*. The fungal diseases cause more than 50 % loss to Soybean cultivation leading to huge economic losses (Agrio 2000) [1]. In order to combat the diseases, the farmers are highly dependent on various harmful chemicals which are not recommended when the environment and human health is concerned.

The environment-friendly options include the use of plant growth promoter's produced by microbes and vermicompost (Rupela *et al.*, 2005) [9]. It is evident from the past research that certain bacterial species such as *Pseudomonas* spp., *Bacillus* spp., *Trichoderma* spp., and *Streptomyces* spp., acted as bio-control agents against the pathogenic fungi. All these strains were isolated from the fields of cultivation and from the vermicompost (Gopalakrishnan *et al.*, 2011a) [2]. The soil contains a wide range of bacteria that are useful to the plants by enhancing the production of plant growth promoting substances, acts as antagonists against pathogenic fungi (Alekhya *et al.*, 2017) [3]. Vermicomposting is the process of biological degradation and conversion of agricultural and household wastes to use manure to plants. Vermicomposting improves the recycling of waste with environmentally safe and pollution free approach. It has the capacity to inhibit the growth of plant pathogens, to mobilize the nutrients, etc. (Postma *et al.*, 2003; Gopala krishnan and Rupela 2011a, c.) [18, 9] Hence, in the present study *Actinomycetes* spp were collected from both soil and vermicompost to check the presence of useful plant growth promoting substances that will enhance the disease

resistance capacity of plants and nutrient uptake capability.

Materials & Methods

The soil samples were collected from Soybean (*Glycine max* (L.) Merr.) cultivated fields in both Kharif and Rabi seasons. The samples were collected up to 30cm depth of the rhizosphere soil and stored in sterile plastic bags, kept at room temperature. Samples were collected from different villages of Guntur district, Andhra Pradesh, India and are given codes as NAVS, KNSS, CHSS

Isolation of *Actinomycetes*

Ten grams of rhizosphere soil and vermicompost samples were added separately in to 90ml saline solution (0.85% of NaCl). The flasks were placed on orbital shaker with 100rpm for 1 hour at room temperature. At the end of the shaking, the samples were serially diluted up to 10^{-4} to 10^{-6} respectively. Taken 0.1 ml of suspension spread on the *Actinomycetes* Isolation Agar (AIA) plate using spread plate technique. The plates were incubated at $28 \pm 2^\circ\text{C}$ for four days. The colonies were observed for morphology and physical properties, Grams staining (Sreevidya *et al.*, 2016) [23]. The pure cultures were subcultured as three replicates and maintained on Starch Casein Agar slants at 4°C for further studies.

In-Vitro Antifungal Activity by Dual Culture Assay (DCA)

A total 93 cultures of *Actinomycetes* were screened for their antagonistic activity against major fungal pathogens of Soybean crop. Viz., *Colletotrichum lindemuthianum*, *Fusarium oxysporum*, and *Rhizoctonia solani* acquired from MTCC (Microbial Type Culture Collection and Gene Bank, Chandigarh, India). Dual culture assay was performed as per the protocol of Anjaiah *et al.*, 1998 [4]. Glucose



COMPARISON OF THE NON-SPECIFIC IMMUNE RESPONSE IN THE HEAD KIDNEY OF EDIBLE CARP AGAINST BACTERIAL INFECTION

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ABSTRACT

Introduction: Occurrence of diseases in edible carps is due to several factors like decreased resistance, poor water quality and bad managerial methods. The most significant factor effecting the health of fish is the incidence of bacterial pathologies in various organs, mainly the primary lymphoid organ, head kidney. *Aeromonas liquefaciens* (Bacterium) may behave as opportunistic pathogen by assailing already compromised or stressed paths. **Objectives:** With the above background, the present investigations were planned to assay protein and DNA profile and histological alterations in head kidney of *Labeo rohita*. **Material and Methods:** Four groups of experimental fish were infected with single doses (group A, 10^{-2} CFU/fish; group B, 10^{-4} CFU/fish; group C, 10^{-5} CFU/fish; group D, 10^{-6} CFU/fish) and two experimental group of fish were infected with multiple doses (4 days interval) (group E, $10^{-2}+10^{-2}$ CFU/fish; group F, $10^{-3}+10^{-3}$ CFU/fish) of *A. liquefaciens* along with uninfected controls (groups, 66 fish). Six fish from a, b, c, d, e, f groups A, B, C, D and E, F and controls were necropsied on each day of eleven observations. Protein and DNA and histology were studied using standard methods. **Results and conclusion:** Protein and DNA level in head kidney of experimental fish (groups A, B, C and D) showed a significant increase and decrease in when compared with controls from hour 1 to 216 of infection. Protein level in head kidney showed a significant rise in experimental groups A and B when compared with controls; and in between the experimental groups A and B. Protein level in head kidney showed a significant rise in experimental groups E and F when compared with controls; and in between the experimental groups E and F. The DNA level in head kidney showed a significant decrease in experimental groups E and F when compared with controls and in between the experimental groups E and F. The statistical analysis showed a significant difference in the level of head kidney protein and DNA when comparison was made between singly infected groups B (10^{-4} CFU/fish) and D (10^{-6} CFU/fish) and repeatedly infected groups E ($10^{-2}+10^{-2}$ CFU/fish) and F ($10^{-3}+10^{-3}$ CFU/fish). The DNA level in head kidney showed a significant decrease in experimental groups A and B when compared with controls and in between the experimental groups A and B. The statistical analysis showed a significant difference in the level of head kidney protein and DNA when comparison was made between singly infected groups B (10^{-4} CFU/fish) and D (10^{-6} CFU/fish) and repeatedly infected groups E ($10^{-2}+10^{-2}$ CFU/fish) and F ($10^{-3}+10^{-3}$ CFU/fish). Infected carps showed lesions and necrosis in head kidney during experimentation. Present investigations indicate a high non-specific immune response in experimentally infected fish compared to controls.

KEYWORDS: Immune response, protein, DNA head kidney, histology, edible carp.

INTRODUCTION

Indian major carps are the most farmed fish in the country and its production is hampered by infectious microbial pathogens. *Aeromonas* species are causing infections in fish found in surface waters, estuarine water, fresh water, food products, sewage, diseased or health fish and in humans.^[1-3] *A. liquefaciens* as a food-borne pathogen, may cause zoonotic diseases and pathologic reaction in host tissues.^[4-5] *Aeromonas* spp. cause degenerative histopathological changes in kidney, liver, gills, stomach and spleen of fish.^[6] The carp immune system has several immune mechanisms

responsible to defend against pathogenic bacteria through non-specific and specific (humoral or cell mediated) immune response. Disease resistance in fish is offered by natural (non-specific) and specific immune parameters.^[7-9] Fish exposed to bacterial pathogens showed abnormal changes in biochemical profile, immune parameters and organ histology.^[10-12] Head kidney, the primary lymphoid organ in fish produce and mature stem cells. The head kidney is characterized by the presence of lymphoid follicles and vessels. Morphological/pathological changes in the lymphoid organ associated with immune response. Lymphocytes



Effect of Cr_2O_3 on the structural, optical and dielectric studies of $\text{LiF-SrO-B}_2\text{O}_3$ glasses

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ABSTRACT

The melt quench technique was involved in synthesizing the glass system $\text{LiF-SrO-B}_2\text{O}_3$ alloyed with Cr_2O_3 in the range of 0 to 0.25 mol%. The aperiodic nature of these glasses was affirmed by the X-ray diffraction (XRD). These glasses were analyzed by contemplating the dielectric characteristics (a.c. conductivity, σ_{ac} , dielectric constant, ϵ' , and dielectric loss, $\tan\delta$ etc.), spectroscopic properties such as electron spin resonance (ESR) optical absorption and Fourier transform infrared (FTIR) analysis. The optical absorption spectra evinced two bands which are features of Cr^{3+} ions in the octahedral domain. Using absorption edges, Urbach energies and optical band gap of these samples were estimated. The hike in the Cr^{3+} ions in the glass C5 (0.05 mol% of Cr_2O_3) is confirmed by the proliferation in the ESR signal intensity and optical absorption peak. The maximum a.c. conductivity of glass C5 was due to the dominant presence of Cr^{3+} ions. FTIR bands revealed that at 0.05 mol% of Cr_2O_3 , BO_4 units were converted into BO_3 units. It is perceived that the semiconducting nature of glass C5 was the highest among all the prepared glasses.

1. Introduction

B_2O_3 is an excellent glass former which can be incorporated in different types of glasses as a flux substance in order to achieve the materials with distinct remarkable chemical and physical characteristics useful for high technological and scientific applications [1,2]. Borate glasses are excellent vitreous components as they find prospective applications in the domain of modern science and technology. Boron forms BO_3 and BO_4 structural units by changing the coordination with oxygen [3–5]. Alkali and alkaline earth ions influence the chemistry of boron. When alkali fluorides are integrated with B_2O_3 then the glasses are expected to become more moisture resistant. The fluorine's of LiF burst the local symmetry of the glass. The Li^+ ions populate the interstitial positions of the glass and develop coordinate imperfections known as dangling bonds [6,7]. The lithium fluoroborate glasses are suitable for radiation dosimetry applications. These $\text{LiF-B}_2\text{O}_3$ glasses are assessed as the best materials as solar energy converters, laser host materials, phosphors and in a number of other electronic components [8,9]. Desirable changes can be done by incorporating the alkaline earth oxides in a borate glass system. The element “strontium” is a good

modifier. The robustness of glasses can be enhanced substantially, by mixing them with SrO in suitable proportion. SrO is an excellent modifier and it penetrates the glass by disintegrating the random matrix [10,11]. The oxygens of such oxide fracture the internal regularity whereas the Sr^{2+} ions settle in the interstitial sites of the glass matrix. Sr^{2+} ions launch the bonding imperfections by cracking the borate bonds (B-O-B) which produces empty gaps and easy tracks for the other doped ions. Glasses combined with SrO expands the reticulation and rigidity of the network due to strong field strength values of Sr^{2+} ions. The glasses become more moisture resistant when SrO is added to them. Glasses containing SrO and their corresponding glass-ceramics can be used as gamma-ray shielding tools. The role of strontium is vital in the domain of bone restoration. It can enhance the metabolism of the bone [12–15].

The glasses amalgamated with transition metal ions have drawn much attention as they are widely used as magnetic materials, cathode materials in the batteries, memory and photo conducting devices [16–20]. Borate glasses are wonderful host materials for incorporation of chromium ions. Chromium is a transition metal ion which exhibits paramagnetic nature. When it deliquesces in the glasses then it makes

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గిరిజనుల ఆర్థిక పరిస్థితులు - జీవన విధానం

- కృపాల జోసఫ్, శాఖాధిపతి, తెలుగు విభాగం, ఆంధ్ర క్రైస్తవ కళాశాల, గుంటూరు

అభివృద్ధి సాధారణంగా మార్పు యొక్క ఒక అంశంగా భావించబడుతుంది. ఇది విస్తృతంగా ప్రభుత్వ చర్య ద్వారా ప్రణాళిక చేయబడింది మరియు నిర్వహించబడుతుంది. ఈ విధంగా, అభివృద్ధి, భావన(ఎ) మార్పు యొక్క ఒక అంశం; (బి) ఒక ప్రణాళిక లేదు ఫ్రీడిక్షన్; (సి) ఆ ప్రణాళిక సాధించినందుకు ప్రభుత్వ ప్రమేయం లేదా goal హించిన లక్ష్యం. “అభివృద్ధి” అనే పదాన్ని అనుమతించే ప్రక్రియ కోసం కూడా ఉపయోగిస్తారు. వారి స్వంత ఆకాంక్షలను తీర్చడానికి ప్రజలను ప్రోత్సహిస్తుంది. అందువల్ల ఇది తప్పనిసరిగా సంబంధం కలిగి వుంటుంది.

“అభివృద్ధి” అనే పదం మానవ కార్యకలాపాల యొక్క అన్ని అంశాలను కలిగి ఉంటుంది. ఇంకా విస్తృత సందర్భంలో, దేశాలు అభివృద్ధి చెందినవి లేదా అభివృద్ధి చెందుతున్నవిగా నిర్వహించబడ్డాయి. కానీ దాని ఎలా సమర్థించవచ్చు ఒకటి అభివృద్ధి చెందాల్సిన వారి కంటే అభివృద్ధి చెందింది. ఈ ప్రశ్నలు ఉన్నాయి ఈ రోజుల్లో కొన్ని గోళాలలో అభివృద్ధి చెందని వాటిని కనుగొన్నప్పుడు లేదా చాలా సున్నితంగా మారుతుంది. మరొకటి ప్రతి చోటా, ఉదాహరణకు, ఒక సమాజం లేదా దేశం మరింత అభివృద్ధి చెందవచ్చు. ఆర్థికముందు; ఏదేమైనా, ఇది సామాజిక ముందు అభివృద్ధి చెందకపోవచ్చు. కాబట్టి, ఒకరు చేయలేరు. కొన్ని అంశాలలో మాత్రమే అభివృద్ధిని నిర్వచించండి; బదులుగా, దీనిని బహుమితీయంగా చూడాలి. యాభైలలో మరియు అరవైల ప్రారంభంలో ఉన్న అభివృద్ధి యొక్క ఇరుకైన భావన తీవ్రంగా ప్రశ్నించబడింది మరియు ఆర్థికతర అంశాలను కూడా చేర్చడానికి విస్తరించింది.

భారతదేశంలో విధాన రూపకర్తలు, నిర్వాహకులు మరియు సామాజిక శాస్త్రవేత్తలు మరియు చర్చను ముద్రాసుక్రైస్తవకళాశాల, మద్రాసు.

అడ్డుకున్నారు. వారి సామాజిక - ఆర్థిక పరివర్తన యొక్క అర్థం, పాత్ర మరియు దిశపై కొనసాగుతుంది. అంతే ముందు మానవ శాస్త్రవేత్తలు మరియు ఇతర సామాజిక శాస్త్రవేత్తలు జరిపిన అధ్యయనాలు వివిధ గిరిజన వర్గాలలో నిరంతరం వివిధ సమస్యలకు ఎత్తి చూపాడు గిరిజన అభివృద్ధి మరియు మంచి ఫలితాలను తీసుకు రావడానికి సూచనలు ఇచ్చింది. కమిటీల నివేదికలు మరియు గిరిజన అభివృద్ధిపై అధ్యయనాలు, ప్రభుత్వాలు తరువాత జరిగాయి వివిధ రకాల నిబంధనలను అందించడం ద్వారా గిరిజన పరిస్థితిని మెరుగుపరచడానికి మరియు పథకాలు అయినప్పటికీ, దురదృష్టవశాత్తూ గిరిజనులు తగినంతగా పొందలేకపోయారు ప్రజాకోసం బద్ధమైన అభివృద్ధి యొక్క ఈ ప్రక్రియ నుండి ప్రయోజనం. గిరిజన అభివృద్ధి అనేది నిజం దేశంలో సమస్యను మూసపోత దృగ్విషయంగా పరిగణించలేము. ఇది మారుతుంది ఒక ప్రాంతం నుండి మరొక ప్రాంతానికి.

ఆంధ్రప్రదేశ్ రాష్ట్రంలో మరియు మొత్తం దేశంలో గిరిజన జనాభా ఉంది. తీవ్రమైన ఆర్థిక మినహాయింపును ఎదుర్కొంటున్న అత్యంత అణగారిన మరియు హానికలిగించే సంఘం. కొన్ని రాజ్యంగ భద్రతలు అందించినప్పటికీ, ఆర్థికంగా లేదు. ఈ సమాజాలలో సామాజిక మరియు రాజకీయ చైతన్యం. షెడ్యూల్ కులాలకు విరుద్ధం మరియు ఇతర వెనుకబడిన కులాల కారణంగా కొంత స్థాయిలో పురోగతి సాధించారు. ప్రభుత్వ రక్షణ వివక్ష విధానాస్త్రాలు, షెడ్యూల్డ్ తెగలు అలాగే ఉన్నాయి. ఆంధ్ర ప్రదేశ్ లోని గిరిజన సమూహాలు :

అధికారికంగా షెడ్యూల్డ్ తెగలుగా నియమించబడిన 35 వర్గాలకు ఆంధ్ర ప్రదేశ్ ఉంది. (ఎస్టీలకు) 2001 జనాభా లెక్కల ప్రకారం వారి సంఖ్య 50,24,104.35 గిరిజన సంస్కృతి సాహిత్యం : జాతీయ సదస్సు-ప్రత్యేక సంచిక

యాత్రీకులు - అంధ్రుల ప్రస్థానం

కనపాల, జోసెఫ్

ప్రాంతీయ, జాతీయ అంతర్జాతీయ భాషా సాహిత్యాలపై అదీదల కాలంలో సదస్సులు నిర్వహించటం మంచి పరిణామం. దీనివల్ల ఆయాదేశాల సంస్కృతి సాంప్రదాయాలు తదితర విషయాలను ఏక కాలంలో తెలుసుకోవడానికి అవకాశం కలుగుతుంది. అసలు ఏదేశానికైనా భాషా సంస్కృతుల్లో ఆ దేశ మనుగడకు మూల స్థంభాలు, అందువల్ల యితాంటే అంతర్జాతీయ సదస్సులో ఎన్నుకునే అంశాలకు ఎల్లలు అనేవి ఉండవు. కనుక నా పత్ర సమర్పణకు సంబంధించిన వ్యాసం కూడా ఆ కోవలోకి వస్తుందని భావిస్తూ.. అంతర్జాతీయ దేశాలైన చైనా, రిజెట్ దేశాలలో తెలుగు వారితో వుండే సంబంధాలను ఈ వ్యాసంలో ప్రస్తావించాను.

కనపాల, జోసెఫ్
అంధ్రోపన్యాసకులు
అంధ్ర క్రైస్తవ కళాశాల
గుంటూరు.

శ్రీ గోస్వామి తులసీదాసు జీవనరేఖలు

కనపాల.జోసఫ్

ఆంధ్రోపన్యాసకులు

ఆంధ్రప్రదేశ్ కళాశాల, గుంటూరు

ప్రసిద్ధ పుణ్యక్షేత్రమైన ప్రయాగ సమీపమున 'బాందా'జిల్లాలో 'రాజాపురము' అను గ్రామము గలదు. అచట ఆత్మారామ్ చౌదరి - అను సుప్రసిద్ధమైన సరయుపారీణబ్రహ్మణుడు ఉండెను. శ్రీమతి హులసీదేవి ఆయనధర్మపత్ని. క్రీ.శ. 1497, విక్రమశకం 1554వ సంవత్సరమున శ్రావణ శుద్ధ సప్తమినాడు అభుక్తమూలా సక్షతమున ఆ పుణ్యదంపతులకు జన్మించిన ముగ్ధల విద్వదే మన గోస్వామి తులసీదాసు. అతడు మాతృగర్భమున 12(పండ్రిండు)మాసములు మసలెను. శిశువైన తులసీదాసు పుట్టగానే రోదనము కావించలేదు. అతని ముఖము నుండి 'రామ్' అను శబ్దము (రామనామము) వినిపించెను. ఆయన నోటిలో ముప్పది రెండు (32) దంతములుండెను. చూచుటకు అతడు ఐదు(5) సంవత్సరముల ఈడుగల బాలకునివలె ఒప్పుచుండెను. ఇట్టి అద్భుతలక్షణములు గల బాలకుని జూచి, ఆయన తండ్రి అమంగళములను శంకించి భీతిలెను. కుమారుని విషయమై ఆత్మారాముడు పెక్కు విధములగు ఊహాగానములను చేయసాగెను. తల్లియైన 'హులసి' మిక్కిలి చింతించెను. అశుభములను శంకించి, ఆమె ఆ పసికందును దశమినాటి రాత్రి దాసీచేతిలో ఉంచి, ఆ దాసి యొక్క అత్తగారింటికి పంపెను. మరునాడే ఆ పవిత్ర మాతృమూర్తి ఈ లోకమును వీడెను. 'చునియా' అను పేరుగల ఆదాసి ఆ శిశువును మిక్కిలి ప్రేమానురాగములతో పెంచెను. తులసీదాసునకు దాదాపు ఐదున్నర సంవత్సరములప్రాయమున చునియా గూడ దివంగతురాలయ్యెను. ఇప్పుడతడు అనాథబాలుడై ఇంటింటికిని తిరుగసాగెను. జగజ్జననియైన పార్వతీదేవికి ఈ అమాయకబాలునిపై కృపగలిగెను. ఆమె బ్రహ్మణస్త్రీ వేషమున ప్రతిదినము ఆ బాలునికడకు వచ్చి, స్వహస్తములతో అతనిచే అన్నము తినిపించుచుండెదది.

రామశైలనివాసియైన శ్రీ అనంతానందజీ ప్రియశిష్యుడు శ్రీ నరహరి ఆనంద. అతడు పరమేశ్వర ప్రేరణచే ఈ బాలకుని వెదకుచు వచ్చెను. ఈ బాలునకు 'రామ్బోలా' అను పేరు పెట్టి, అతడు వానిని తనతో అయోధ్యకు తీసికొనివెళ్ళెను. విక్రమ శకము 1561(క్రీ.శ. 1504)వ సంవత్సరమున మాఘ శుద్ధ పంచమీ శుక్రవారము నాడు అతడు ఆ బాలునకు ఉపనయన సంస్కారములను జరిపెను. ఎవ్వరి ప్రేరణ లేకయే ఏకసంతగ్రాహియైన 'రామ్బోలా'గురుపదేశమైన వెంటనే గాయత్రీమంత్రమును ఉచ్చరించెను. దానిని జూచి అందఱును చకితలైరి. పిమ్మట సరహరి స్వామి రామ్బోలాకు వైష్ణవ సంప్రదాయమును అనుసరించి, పంచసంస్కారములను జరిపించి, రామమంత్ర దీక్షను ఒసంగెను. అయోధ్యయందే అతనిచే విద్యాధ్యయనము చేయించెను. బాలకుడైన రామ్బోలా మిక్కిలి బుద్ధిమంతుడు, చురుకైనవాడు. అతడు ఏకసంతగ్రాహి. 'గురుముఖతః' ఒకసారి విన్నంతనే ఆ విషయము అతనికి కంఠస్థమగుచుండెను. ఆ గురుశిష్యులిద్దరును అచట కొంతకాలము గడిపి, అనంతరము 'వరాహక్షేత్రము'నకు చేరిరి. అక్కడ శ్రీ నరహరిస్వామి తులసీదాసునకు రామచరితము వినిపించెను. కొలదిదినముల పిమ్మట వారు కాశీనగరమును చేరిరి. కాశీలో శేషనాతనస్వామివారికడ తులసీదాసు పదనైదు(15) సంవత్సరముల కాలము అధ్యయనము చేసి, వేదములను, వేదాంగములను జిహ్వాగ్రమున నిలుపుకొనెను. ఇచ్చట ఆయనకు సాంసారిక వాసనలు జాగృతములయ్యెను. గురువాజ్ఞను దీసికొని, తిరిగి తన జన్మ స్థానమునకు చేరెను. అచట తన వారెవ్వరును మిగిలి యుండకపోవుటను అతడు గ్రహించెను. తన మాతాపిత్రులకు విధ్యుక్తములైన శ్రాద్ధకర్మలనాచరించెను. అచటనే యుండి జనులకు శ్రీరామచరితమును వినిపించసాగెను.

విక్రమ శకము 1583(క్రీ.శ. 1526)వ సంవత్సరమున జ్యేష్ఠశుద్ధ త్రయోదశీ గురువారము నాడు భారద్యాజగోత్రజయైన 'రత్నావళి'యను సుందరి(కన్య)తో ఆయనకు వివాహమయ్యెను. ఆ క్రొత్త దంపతులు సుఖసంతోషములతో తమజీవితమును కొనసాగించుచుండిరి. ఒకసారి రత్నావళి తన సోదరునితో గూడి, పుట్టింటికి వెళ్లెను. కొంతసేపైన తరువాత తులసీదాసు భార్యమీది ప్రేమతో తన ఇంటినుండి బయలుదేలి, తన భార్యపుట్టింటికి చేరెను. అతనిని జూచి, భార్య రత్నావళి తన భర్తను చులకన చేయుచూ ఇట్లనెను. "రక్తమాంసములతో గూడిన ఈ నా తనువు పైగల ఆసక్తిలో నగమైనను మీకు భగవంతునిపై ఉన్నచో మీరు తరించియుండెడివారు". ఆమె మాటలు తులసీదాసు మనస్సులో బాగుగా నాటకొనెను. దానితో ఆయనలో అంతర్మథనము జరిగెను. ఆయనకు కనువిప్పు కలిగెను. వెంటనే ఆయన మనస్సు భగవంతునిమీదికి మఱియెను. మఱుక్షణముననే అతడు అచటి నుండి తన ఇంటికి చేరెను. పిదప ప్రయాగ వెళ్ళెను. అచ్చట తులసీదాసు గృహస్థవేషమును పరిత్యజించి, సాధువేషమును స్వీకరించెను. పిమ్మట తీర్థయాత్రలను గావించుచు అతడు కాశీ చేరెను. ఈ సమయముననే ఆయనకు మానససరోవరమును 'కాకభుశుండి' దర్శనమాయెను.

31. ఇనాక్ నాటకాలు - స్త్రీ వాదం

కనపాల. జోనఫ్

ఆంధ్రోపన్యాసకులు

ఆంధ్రకైస్తవ కళాశాల, గుంటూరు. ఆంధ్రప్ర.

చరవాణి : 9849025505

1939 జూలై -1 తారీఖున జన్మించిన ఆచార్య కొలకలూరి ఇనాక్ గారు బహుగ్రంథకర్త. బహుముఖ ప్రజ్ఞాశాలి. సమకాలిక సాహితీ జగత్తులో సుప్రసిద్ధ విమర్శకుడు. కవి. రచయిత. కథకుడు. నాటకకర్త. కవిత్వం, నాటకం, నవల, కథ, వ్యాసం, విమర్శ, పద్యంలాంటి అన్ని ప్రక్రియల్లో చేయి తిరిగిన వ్యక్తులు తెలుగు సాహిత్యంలో అరుదుగా కనిపిస్తారు. అలాంటి వారిలో ఆచార్య కొలకలూరి ఇనాక్ గారు ఒకరు.

'కావ్యేషు నాటకం రమ్యమ్' అనీ 'నాటకాంతం హి సాహిత్యమ్' అనీ సంస్కృత అలంకారికులు నాటక సాహిత్య విశిష్టతను చెప్పి ఉన్నారు. శ్రవ్య, దృశ్యకావ్యాలలో దృశ్యకావ్యాలలో దృశ్యకావ్యాలకే సాహితీ లోకంలో గౌరవాదరణలు మెండు. ఒక విషయాన్ని విని అర్థం చేసుకోవడంలో సౌలభ్యం ఉంది. దృశ్యకావ్యానికి మనసుకు హత్తుకుపోయే లక్షణం ఉంది. ప్రేక్షకుల హృదయాల్లో పదికాలాల పాటు సుస్థర స్థానాన్ని దృశ్యకావ్యాలు సంపాదించుకొంటాయి. నడుస్తున్న కాలంలో నాటక సాహిత్య రచయితల్లో చెప్పుకోదగిన కొద్ది మందిలో ఇనాక్ ఒకరు. ముఖ్యులు కూడా.

ఇనాక్ సాక్షి. ముని వాహనుడు లాంటి మత సంబంధ ఇతివృత్తాలున్న నాటకాలను, నాగార్జునుడు లాంటి చారిత్రక నాటకాన్ని, కీ, మనలాంటి మనిషి, జై హింద్ లాంటి సాంఘిక నాటకాలనూ రాశారు. 1950-70ల నడిమి కాలంలోని సినీ జీవిత నేపథ్యంలో రాసిన నాటకం 'కీ'. 1962లో జరిగిన చైనా దురాక్రమణ ఇతివృత్తంతో రాసిన 'జైహింద్' నాటకం దేశభక్తి ప్రబోధకంగా ఉంటుంది. 'మనలాంటి మనిషి' నాటకంలో దారి తప్పిన స్త్రీ అగచాట్లను రామాయణ కథాసంతో అభేదం కల్పిస్తూ మానవ సంబంధాలు చిత్రించబడ్డాయి. స్త్రీని కేంద్ర బిందువుగా నిల్పి రాసిన నాటకం 'మనలాంటి మనిషి' స్త్రీ వాద దృష్టితో రాసిన నాటకంగా ఇది నిలుస్తుంది.

స్త్రీ పురుష సంబంధాలు ఈ నాటకంలో ప్రధానంగా చర్చించబడిన అంశం స్త్రీ పురుష సంబంధాలలో ద్వంద్వనీతి. వివాహేతర సంబంధాలని గ్లోరిఫై చేసిన సమాజమే విధిలేని పరిస్థితుల్లో అవసరార్థం తప్పుదారి పట్టిన స్త్రీలను మాత్రం వేధించి వెంట తరుముతుంది. ఈ అంశాన్నే ఇతి వృత్తంగా 'మనలాంటి మనిషి' నాటకం రచించబడింది. స్త్రీకి ప్రమాదవశాత్తు ఏర్పడిన అవాంఛనీయ పరిస్థితుల్ని అనుకూలంగా చేసుకొని సంఘం ఆమెను వేధించడాన్ని ఈ నాటకం చక్కగా చిత్రించింది. ప్రత్యక్షంగానూ ఎన్నోరకాలుగా దోపిడీకి గురవుతున్న స్త్రీని ప్రధాన పాత్రగా మలిచి, ఆమె సమస్యలకు పరిష్కారాన్ని కూడా రచయిత సూచించాడు. ఈ నాటకంలో రామ బ్రహ్మం, రామలింగం, రామకోటి రామ్మూర్తి, ఆంజనేయులు, చలమయ్య, రాజారావు అనే పురుష పాత్రలు, సీత అనే స్త్రీ పాత్ర ఉన్నాయి. రెండు తప్పు మిగిలిన అన్ని పేర్లూ రామాయణ ఇతిహాస సంబంధమైన పేర్లే. రాముడు కూడా మనలాంటి మనిషేనన్న తత్వాన్ని ఈ నాటకంలో రచయిత ఇమిడ్చాడు. రామాయణంలో రాముడు సీత కోసం శ్రమిస్తే, నాటకంలో రామ్మూర్తి కోసం సీత శ్రమిస్తుంది.

DECOMPOSITION OF PRE A*-ALGEBRA WITH M_x

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Abstract: This paper is a study on the decomposition of Pre A*- algebra. In fact, it is proved that if A is a Pre A*- algebra and $x \in A$, then the set, $M_x = \{s \in A / s \leq x\}$ is a Pre A*- algebra under the induced operations $\wedge, \vee$ where the complementation is defined by $s^* = x \wedge s^-$, the relation $\leq$ (less than or equal to) defined on Pre A*- algebra A by $s \leq x$ if $s \wedge x = x \wedge s = s$. Based on the well known result, if B is a Boolean algebra and $a \in B$, the set $(a) = \{x \in B / x \leq a\}$ ($[a] = \{x \in B / a \leq x\}$) is a Boolean algebra under the induced operations $\wedge, \vee$ where the complementation is defined by $x^* = a \wedge x^-$ ($x^* = a \vee x^-$), and then B is isomorphic to $(a) \times [a]$, it is attested a similar decompositions for a Pre A*- algebra as well.

Keywords: Centre of Pre A*- Algebra, Decomposition of Pre A*- Algebra, Pre A*- Algebra, Pre A*- Isomorphism.

1. Introduction: Koteswara Rao (1994) firstly introduced the notion of A*- algebras and if-then-else structures based on Manes (1993) Adas and the Equational Theory of If-then-else. Later, Venkateswara Rao (2000) introduced the concept of Pre A*- algebras as a reduct of A*- algebra. Venkateswara Rao and Srinivasa Rao (2010) studied the well known Cayley's theorem on centre of Pre A*- algebras. Furthermore, Venkateswara Rao et.al., (2011) observed a decomposition of Pre A*- algebra. In this manuscript, we will continue our study to establish some more results in this conception.

2. Preliminaries:

Definition: An algebra $(A, \wedge, \vee, (-)^-)$ where A is a nonempty set with 1; $\wedge, \vee$ are binary operations and $(-)^-$ is an unary operation satisfying

- (i) $x^{--} = x$, for all $x \in A$
- (ii) $x \wedge x = x$, for all $x \in A$
- (iii) $x \wedge y = y \wedge x$, for all $x, y \in A$
- (iv) $(x \wedge y)^- = x^- \vee y^-$, for all $x, y \in A$
- (v) $x \wedge (y \vee z) = (x \wedge y) \vee (x \wedge z)$, for all $x, y, z \in A$
- (vi) $x \wedge (y \vee z) = (x \wedge y) \vee (x \wedge z)$, for all $x, y, z \in A$
- (vii) $x \wedge y = x \wedge (x^- \vee y)$, for all $x, y \in A$, is called a Pre A*- algebra.

Example: $3 = \{0, 1, 2\}$ with operations $\wedge, \vee, (-)^-$ defined below is a Pre A*- algebra.

$\wedge$	0	1	2	$\vee$	0	1	2	x	x^-
0	0	0	2	0	0	1	2	0	1
1	0	1	2	1	1	1	2	1	0
2	2	2	2	2	2	2	2	2	2



Pesticide Residues in Selected Vegetables Collected from Local Markets in Vijayawada City

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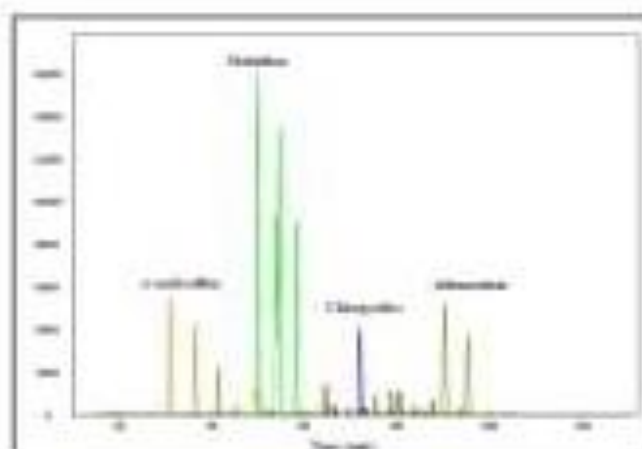
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ABSTRACT

Vegetable samples of green chilly, cabbage, tomato and brinjal collected from market in five regions of Vijayawada municipality in April 2017. Selected vegetables tested for the presence of pesticide residues like pyrethroids, organo chlorine compounds and organo phosphorous compounds using a gas chromatograph equipped with electron capture and Thermo sensitive detectors of the samples tested, chilly, cabbage, Tomato and brinjal were found to have pesticide residues in above the permissible residues. Among the organo chlorine compounds α -endosulfan, was detected in 2.34 % of the samples with residues. These were taken from green chili and cabbage samples. Parathion residues, such as deltamethrin detected in 10.24 % of the samples with residues in tomato and brinjal, organo phosphate compound residues such as chlorpyrifos and Malathion were found in 18 % of the samples with residues, which were taken from all vegetable of the positive samples, 10.2 % were found contain residues exceeding the prescribed maximum residue limit. The average pesticide residue content across all the vegetable samples was ranging from 0.04 to 1.024 ppm.

Graphical Abstract



GC-MS spectra of pesticide residues in the vegetable samples

Keywords: Pesticide Residues, Vegetable samples.



Isolation and Identification of Bio Active Photochemical Compounds from *Ventilago denticulata* Stem using GC-MS

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ABSTRACT

The present study explore the primary phytochemical study using gas chromatography-mass spectroscopy (GC-MS) and in vitro antimicrobial study (against gram positive bacteria and gram negative bacteria) was performed on *n*-hexane(50%)+Benzene (25%)+25% ethanol stem extract of *Ventilago denticulata*. Preliminary phytochemical screening revealed that plant contains 17 bio active compounds with different concentrations. Qualitative analysis of the plant parts the presence of various components of therapeutic importance including tannins, saponins, phenolic compounds, glycosides, flavonoids etc., The present study provides information about the availability of some bio active phytoconstituents, which can be useful to provide dietary elements and it may also help in developing new drug formulations. There was a need to evaluate the extracts of the plant in order to provide scientific proof for its application and to explore the possibility of treating various diseases and disorders. Literature review indicates that very less work has been done on this plant and there is a wide scope for investigation.

Graphical Abstract



Ventilago denticulata stem [Family: Rhamnaceae]

Keywords: Isolation, Bio active photochemicals, *Ventilago denticulata*, Stem extract GC-MS.